A NEW SPECIES OF *ALOCASIA* (ARACEAE: COLOCASIEAE) FROM PANAY ISLAND, PHILIPPINES

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ABSTRACT

Alocasia nycteris Medecilo, Yao & Madulid is described as a new species from Aklan and Antique, Panay Island, Philippines. The species is distinguished by its bat-wing shaped blade and deeply undulated to subpinnatifid leaf margins. The new species is most closely similar to *A. sanderiana* W. Bull.

Key Words: Araceae, Philippines, Panay Island, endemic plant, threatened plant

RESUMEN

Se describe **Alocasia nycteris** Medecilo, Yao & Madulid especie nueva de Aklan y Antique, Panay Island, Filipinas. La especie se distingue por sus láminas en forma de ala de murciélago y márgenes de profundamente ondulados a subpinnatífidos. La nueva especie es la más similar a *A. sanderiana* W. Bull.

There are 20 genera and about 130 species belonging to the family Araceae in the Philippines. The largest genus in the Philippines is *Alocasia* (Schott) G. Don with 14 species recorded so far (Hay 1999) but based on recent field studies, the list increases to at least 18 species (Medecilo, in prep.). All species of *Alocasia* in the Philippines are endemic, except *A. macrorrhizos* (L.) G. Don which is widespread throughout the Asian tropics and never found away from human disturbance anywhere in its range. *Alocasia* has more than 75 species in the Malesian region, Sri Lanka, Australia, southern China and the southernmost parts of Japan.

The most recent taxonomic revision on the genus in the country was done by Hay (1999). Twelve species enumerated by Merrill (1925) was reduced to ten and four new species were added, namely: *A. boyceana* A. Hay, *A. clypeolata* A. Hay, *A. ramosii* A. Hay, and *A. scalprum* A. Hay. The center of diversity of the genus is Borneo with at least 21 species (Hay 1999, 2000) and the country is the second most species-rich sub region, next to Borneo in the Malesian region. Some of the Philippine species have West Malesian and continental Asian affinity. The conservation status and local endemicity was discussed in the revisionary work of Hay (1999). Six Philippine species, namely: *A. atropurpurea* Engl., *A. sinuata* N.E. Br., *A. portei* Becc. & Engl., *A. scalprum* A. Hay, *A. sanderiana* Hort. ex. Bull, and *A. clypeolata* A. Hay were known from two or three herbarium collections taken in the wild but most of the species are known from cultivation. Most species are known in horticulture except *A. atropurpurea* Engl., and systematic measures for protection are desired. Several species are of ornamental interest because of the appearance of the foliage leaves. *A. sanderiana* Hort. ex. Bull is being used for hybrid utilization and reported as extinct in the wild. Other species include *A. micholitziana* Sander, *A. scalprum* A. Hay, *A. zebrina* K. Koch & Veitch, *A. sinuata* N.E. Br., *A. heterophylla* Merr. and *A. ramosii* A. Hay. Some of these species are being tissue cultured for commercial purposes.

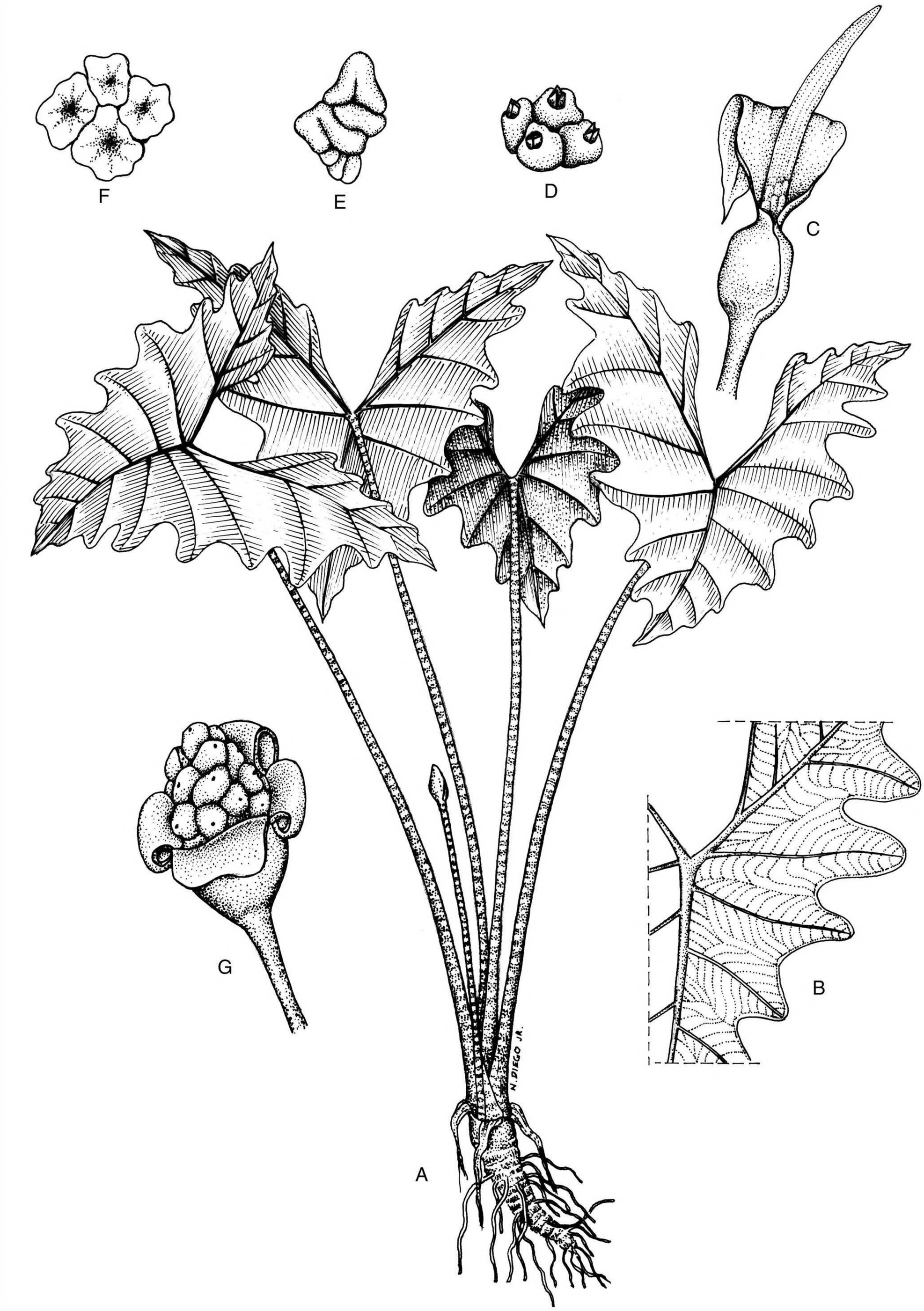

Fig. 1. *Alocasia nycteris* Medecilo, Yao & Madulid, sp. nov. **A.** Habit; **B.** venation; **C.** Inflorescence; **D.** Pistils; **E.** Neuter organs of sterile interstice (basal); **F.** Synandria (male interstice); **G.** Infructescence. Scale: A,B,C and G = 2 cm; D–F = 3 mm.

Fig 2. Close-up view of leaf showing the widely sagittate and deeply undulated to subpinnatifid margins.

Fig 3. Close-up view of infructescence.

Alocasia nycteris Medecilo, Yao & Madulid, sp. nov. (**Figs. 1–3**). Type: PHILIPPINES: Nabas, Aklan, Panay Island, 11°54'18"N and 121°59'43"E, 3 Nov 2005, *Medecilo* 397 (holotype: PNH; isotypes: DLSU, DLSU-D).

Alocasia sanderiana arte similis in foliis late sagittatis profunde undulatis, sed spadicis appendice longa, ovario subgloboso, interstitiis sterilibus irregulariter factis differt.

Terrestrial robust herb to 1.5 m tall; stem erect to decumbent, up to 12 cm × 2 cm; Leaves 2–4 together, subtended by cataphylls; cataphylls papery, up to 12 cm long by 2 cm wide at base, narrowly ovate, acuminate; **petiole** 45–100 cm × 1.5–2.0 cm wide, green with blackish green streaks, sheathed from one–third to one–quarter its length, marginally marcescent; **blade** hastate to sagittate, 20–37 cm × 35 cm wide at the middle, coriaceous, dark glossy green adaxially, paler green abaxially, membranous when dry, margin deeply undulated to subpinnatifid along margin; **anterior lobe** widely triangular or deltoid, acuminate at apex, 3–4 pairs of lateral veins nearly opposite diverging at 60–65° angle on each side of the anterior costa; **axillary glands** conspicuous, brownish green, 0.1 mm diam.; **secondary veins** very fine, 3 mm apart arising from the anterior costa and primary lateral veins then abruptly deflected to the margin not forming interprimary collective veins; **posterior lobes** diverging at 85°–95° angle, up to 24 cm long; posterior costae naked in the sinus for 3–4 cm, tip rounded, in some leaves forked, with 3 primary veins arising from the posterior costa; inner side of the posterior lobe up to 4 cm wide at the middle, lanceolate. **Inflorescence** 1–2 together, subtended by cataphylls; cataphyll whitish green, narrowly ovate, 10–12cm × 3–4 cm at the middle, mucronate to 2 mm long, thick when fresh; **peduncle** up to 24 cm long × 1 cm wide at base, light green with grooves at the base; **spathe** up to 10 cm; lower spathe tube ovoid, light green, 1.5cm × 1cm diam.; limb narrowly lanceolate, cucullate, pale yellow, tip acuminate, separated from the limb by a short deep constriction; **spadix** shorter than the spathe, partly adnate to the lower spathe at 1.5 mm; female zone 10 mm long, 7 mm wide at the middle; ovaries light green, subglobose, 3 mm in diam.; stigma 3-lobed; lobes, erect, 1 mm diam.; style 0.5 mm long, brownish green; pistillodes reduced, irregular shape with holes in the center, 1–2mm wide, whitish; sterile interstice 5 mm long × 4 mm wide, cylindric; whorl comprised of diamond-shaped to rhombo-hexagonal synandrodes, 2 mm wide; male 14 × 6 mm, cylindric, whitish green; synandria irregular to rhombo-hexagonal, slightly wavy at the edges, 1.5–2 mm diam., apical pores capped by synconnective; appendix 40 mm long × 5mm wide, yellow, tapering. Infructescence oblong. Fruit a berry, globose, 10 mm diam, orange when mature, 1–3 seeded. Seeds, greenish-black, globular, 2 mm in diam.

Distribution.—PHILIPPINES: Panay Island, Nabas to Ibajay, Aklan and Antique, 0–20 masl. Endemic.

Habitat.—Remnant lowland forests and secondary forests. Common on rocky areas. Prefers shaded places along roadsides. It also grows in disturbed secondary forest near ricefields.

Specimens examined: **PHILIPPINES. Aklan Prov.:** Nabas, living collections of Ray Ong in San Juan, Metro Manila, 3 Nov 2005, *Medecilo 397; Medecilo 398* (DLSU-DH 701-702).

Notes.—*Alocasia nycteris* resembles *A. sanderiana* W. Bull and *A. portei* Schott in having deeply undulated to subpinnatifid blade margins. It differs from *A. sanderiana* by its larger, taller habit, not having peltate leaves, the broadly triangular, hastate-sagittate blade, longer posterior lobes (in some individuals) and the absence of a silver white midrib and primary lateral veins. The color of the leaves of *A. nycteris* is green on both lower and upper surfaces while *A. sanderiana* is shiny, deep blackish green in the adaxial side and purple in the abaxial surface.

The species described here was first introduced to the public by an aroid enthusiast, Antonio Advincula during a garden show of the Philippine Horticultural Society, Inc. (PHSI) in 2003. George Yao, former President of the PHSI featured the species in the *International Aroid Society Newsletter* Vol.5, No. 3 (Aug 2003) and named it *Alocasia advincula*. The species name, however, could not be considered as validly published in accordance with the International Code of Botanical Nomenclature (Greuter et al. 2000) as it lacking a Latin diagnosis, and there is no rank indicated and no citation of the holotype.

Etymology.—The specific epithet 'nycteris' alludes to the bat-shaped leaves of this plant. *Nycteris* is a genus of African and Asiatic bats comprising the hollow-faced bats. The species is known by its horticultural name "Bat Alocasia." It was recently introduced in the horticultural trade and is now becoming popular as an indoor or pot plant. It can be easily propagated vegetatively by separation of the suckers and division of the rhizomes. It is best grown under shade with adequate water supply. The plant is not only known in local markets but also in the international markets.

Conservation status.—Plants are still commonly found along roadsides and in private lands near secondary forests. At present the populations along accessible places are under threat because of over collection for horticultural purposes and from habitat destruction. No legal protection is given to the plant at present. Thus, it is highly recommended that appropriate conservation measures are imposed to prevent rapid decline of population. Mass propagation of the plant by tissue culture is an alternative to collection of the plants in the wild. No populational studies have been made and information is lacking about the biology, phenology, pollination and reproductive biology of the species.

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